

IN THE UNITED STATES PATENT & TRADEMARK OFFICE

Application No. : 10/682,298
Title : DETAIL-IN-CONTEXT LENSES FOR MULTI-LAYER
IMAGES
Applicant : Zeenat Jetha, et al.
Filed : October 10, 2003
Confirmation No. : 7344
Art Unit : 2628
Examiner : Jeffery J. Chow
Docket No. : 198821-368247
Customer No. : 27155

Mail Stop Appeal Brief - Patents
Commissioner of Patents
P.O. Box 1450
Alexandria, V.A. 22313-1450

APPEAL BRIEF
(AMENDED)

Sir:

This Appeal Brief is in response to the Examiner's Final Office Action mailed August 6, 2007 and to the Notice of Panel Decision from Pre-Appeal Brief Review mailed December 14, 2007.

Please note that a Notice of Appeal and the appropriate fees were filed on October 26, 2007. The original Appeal Brief and the appropriate fees were filed on January 2, 2008. This amended Appeal Brief is in response to the Patent Appeal Center Specialist's Notice of Non-Compliant Appeal Brief mailed January 25, 2008.

This Appeal Brief contains submissions under the following headings in the order set forth below:

- I. Real Party in Interest
- II. Related Appeals and Interferences
- III. Status of Claims
- IV. Status of Amendments
- V. Summary of Claimed Subject Matter
- VI. Grounds of Rejection to be Reviewed on Appeal
- VII. Arguments
- VIII. Claims Appendix
- IX. Evidence Appendix
- X. Related Proceedings Appendix

Please note that the final page of the Arguments submission bears the practitioner's signature.

I. REAL PARTY IN INTEREST

The real party in interest is Idelix Software Inc., the assignee of record.

II. RELATED APPEALS AND INTERFERENCES

None.

III. STATUS OF CLAIMS

The status of claims in this application is as follows:

1. Total Number of Claims in Application

There are 35 claims pending in this application, numbered 1-35.

2. Status of All of the Claims

- A. Claims cancelled: None.
- B. Claims withdrawn for consideration but not cancelled: None.
- C. Claims pending: Thirty-five, namely, Claims 1-35.
- D. Claims allowed: None.
- E. Claims objected to: None.
- F. Claims rejected: Thirty-five, namely, Claims 1-35.

3. Claims on Appeal

The claims on appeal are Claims 1 and 20.

IV. STATUS OF AMENDMENTS

None.

V. SUMMARY OF CLAIMED SUBJECT MATTER

Please note that page, line, figure, and item references in the following summary are to the specification and drawings as originally filed.

With respect to presently rejected Claim 1, the claimed subject matter is a method for editing a multi-layer original image (page 23, lines 12-22) displayed on a display screen (**340** in FIG. 3; page 12, lines 7-12).

The method comprises the following steps:

in response to receiving an indication to edit a region (**681** in FIG. 6; page 23, lines 21-22) of said original image (page 23, lines 12-22), distorting a portion of a first layer (**680** in FIG. 6; page 23, lines 16-18) of said original image (page 23, lines 12-22) to produce a distorted image (**680** in FIG. 6; page 23, lines 16-18) for said region (**681** in FIG. 6; page 23, lines 21-22), said distorted image (**680** in FIG. 6; page 23, lines 16-18) including a magnified region (**620** in FIG. 6; page 23, lines 16-18) having a magnification for said region (**681** in FIG. 6; page 23, lines 21-22) at least partially surrounded by an at least partially compressed region (**630** in FIG. 6; page 23, lines 16-18) where said magnification decreases to that of said original image (page 23, lines 12-22) to provide context for said magnified region (**620** in FIG. 6; page 23, lines 16-18) with respect to said original image (page 23, lines 12-22); overlaying said distorted image (**680** in FIG. 6; page 23, lines 16-18) on said region (**681** in FIG. 6; page 23, lines 21-22) in a second undistorted layer (**670** in FIG. 6; page 23, lines 14-15) of said original image (page 23, lines 12-22) to produce an overlaid image (**600** in FIG. 6; page 23, lines 12-22) and displaying said overlaid image (**600** in FIG. 6; page 23, lines 12-22) on said display screen (**340** in FIG. 3; page 12, lines 7-12) to replace display of said original image (page 23, lines 12-22), said distorted image (**680** in FIG. 6; page 23, lines 16-18) at least partially surrounded by non-overlaid portions (**670** in FIG. 6; page 23, lines 14-15) of said second undistorted layer (**670** in FIG. 6; page 23, lines 14-15) in said overlaid image (**600** in FIG. 6; page 23, lines 12-22); and, upon completion of editing of said overlaid image (**600** in FIG. 6; page 23, lines 12-22), selectively propagating edits (**710** in FIGS. 7 and 8; page 23, line 23 to page 24, line 14)

made to said first layer (680 in FIG. 6; page 23, lines 16-18) through to said second undistorted layer (670 in FIG. 6; page 23, lines 14-15) of said original image (page 23, lines 12-22).

With respect to presently rejected Claim 20, the claimed subject matter is a method for generating a presentation (600 in FIG. 6; page 23, lines 12-22) of a region (681 in FIG. 6; page 23, lines 21-22) of a multi-layer original image (page 23, lines 12-22) for display on a display screen (340 in FIG. 3; page 12, lines 7-12).

The method comprises the following steps:

distorting a portion of a first layer (680 in FIG. 6; page 23, lines 16-18) of said original image (page 23, lines 12-22) to produce a distorted image (680 in FIG. 6; page 23, lines 16-18) for said region (681 in FIG. 6; page 23, lines 21-22), said distorted image (680 in FIG. 6; page 23, lines 16-18) including a magnified region (620 in FIG. 6; page 23, lines 16-18) having a magnification for said region (681 in FIG. 6; page 23, lines 21-22) at least partially surrounded by an at least partially compressed region (630 in FIG. 6; page 23, lines 16-18) where said magnification decreases to that of said original image (page 23, lines 12-22) to provide context for said magnified region (620 in FIG. 6; page 23, lines 16-18) with respect to said original image (page 23, lines 12-22); and,

overlaying said distorted image (680 in FIG. 6; page 23, lines 16-18) on said region (681 in FIG. 6; page 23, lines 21-22) in a second undistorted layer (670 in FIG. 6; page 23, lines 14-15) of said original image (page 23, lines 12-22) to generate said presentation (600 in FIG. 6; page 23, lines 12-22), said distorted image (680 in FIG. 6; page 23, lines 16-18) at least partially surrounded by non-overlaid portions (670 in FIG. 6; page 23, lines 14-15) of said second undistorted layer (670 in FIG. 6; page 23, lines 14-15) in said presentation (600 in FIG. 6; page 23, lines 12-22); and,

displaying said presentation (600 in FIG. 6; page 23, lines 12-22) on said display screen (340 in FIG. 3; page 12, lines 7-12).

In general, the invention is summarised in the presently pending claims.

VI. GROUND OF REJECTION TO BE REVIEWED ON APPEAL

1. Whether Claim 1 is unpatentable under 35 U.S.C. 103(a) over United States Patent No. 6,523,024 to Yajima et al. (“Yajima”) in view of “The Digital Magazine of InfoVis.net: Focus + Content” by Juan C. Dursteler (“Dursteler”), United States Patent Application Publication No. 2002/0044154 by Baar et al. (“Baar”), and United States Patent Application Publication No. 2003/0052896 by Higgins et al. (“Higgins”).
2. Whether Claim 20 is unpatentable under 35 U.S.C. 103(a) over Yajima in view of Dursteler, Baar, and Higgins.

VII. ARGUMENTS

This section contains submissions under the following subheadings in the order set forth below:

A. Grouping of Claims

B. Statement of Law

1. Claim Rejections Under 35 U.S.C. 102 - Anticipation
2. Claim Rejections Under 35 U.S.C. 103 - Obviousness

C. Applicant's Arguments With Respect To Each Ground Of Rejection To Be Reviewed On Appeal

1. Whether Claim 1 is unpatentable under 35 U.S.C. 103(a) over United States Patent No. 6,523,024 to Yajima et al. ("Yajima") in view of "The Digital Magazine of InfoVis.net: Focus + Content" by Juan C. Dursteler ("Dursteler"), United States Patent Application Publication No. 2002/0044154 by Baar et al. ("Baar"), and United States Patent Application Publication No. 2003/0052896 by Higgins et al. ("Higgins").
2. Whether Claim 20 is unpatentable under 35 U.S.C. 103(a) over Yajima in view of Dursteler, Baar, and Higgins.

A. Grouping of Claims

The claims under appeal are independent Claims 1 and 20. There are two groups of claims. The first group of claims includes a single claim, namely, Claim 1, which rises or falls by itself. The second group of claims includes a single claim, namely, Claim 20, which rises or falls by itself.

B. Statement of Law

1. Claim Rejections Under 35 U.S.C. 102 - Anticipation

There are presently no outstanding rejections in this matter under 35 U.S.C. 102.

2. Claim Rejections Under 35 U.S.C. 103 - Obviousness

Statement of the Law

MPEP Section 2143: Examples of Basic Requirements of a *Prima Facie* Case of Obviousness

The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 550 U.S. ___, ___, 82 USPQ2d 1385, 1395-97 (2007) identified a number of rationales to support a conclusion of obviousness which are consistent with the proper “functional approach” to the determination of obviousness as laid down in *Graham*. The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR* noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit.

Exemplary Rationales

Exemplary rationales that may support a conclusion of obviousness include:

- (A) Combining prior art elements according to known methods to yield predictable results;
- (B) Simple substitution of one known element for another to obtain predictable results;
- (C) Use of known technique to improve similar devices (methods, or products) in the same way;
- (D) Applying a known technique to a known device (method, or product) ready for improvement to yield predictable results;

(E) “Obvious to try” – choosing from a finite number of identified, predictable solutions, with a reasonable expectation of success;

(F) Known work in one field of endeavor may prompt variations of it for use in either the same field or a different one based on design incentives or other market forces if the variations are predictable to one of ordinary skill in the art;

(G) Some teaching, suggestion, or motivation in the prior art that would have led one of ordinary skill to modify the prior art reference or to combine prior art reference teachings to arrive at the claimed invention.

MPEP Section 2143.03: All Claim Limitations Must Be Considered

“All words in a claim must be considered in judging the patentability of that claim against the prior art.” *In re Wilson*, 424 F.2d 1382, 1385, 165 USPQ 494, 496 (CCPA 1970). If an independent claim is nonobvious under 35 U.S.C. 103, then any claim depending therefrom is nonobvious. *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

C. Applicant's Arguments With Respect To Each Ground Of Rejection To Be Reviewed On Appeal

1. Whether Claim 1 is unpatentable under 35 U.S.C. 103(a) over United States Patent No. 6,523,024 to Yajima et al. ("Yajima") in view of "The Digital Magazine of InfoVis.net: Focus + Content" by Juan C. Dursteler ("Dursteler"), United States Patent Application Publication No. 2002/0044154 by Baar et al. ("Baar"), and United States Patent Application Publication No. 2003/0052896 by Higgins et al. ("Higgins").

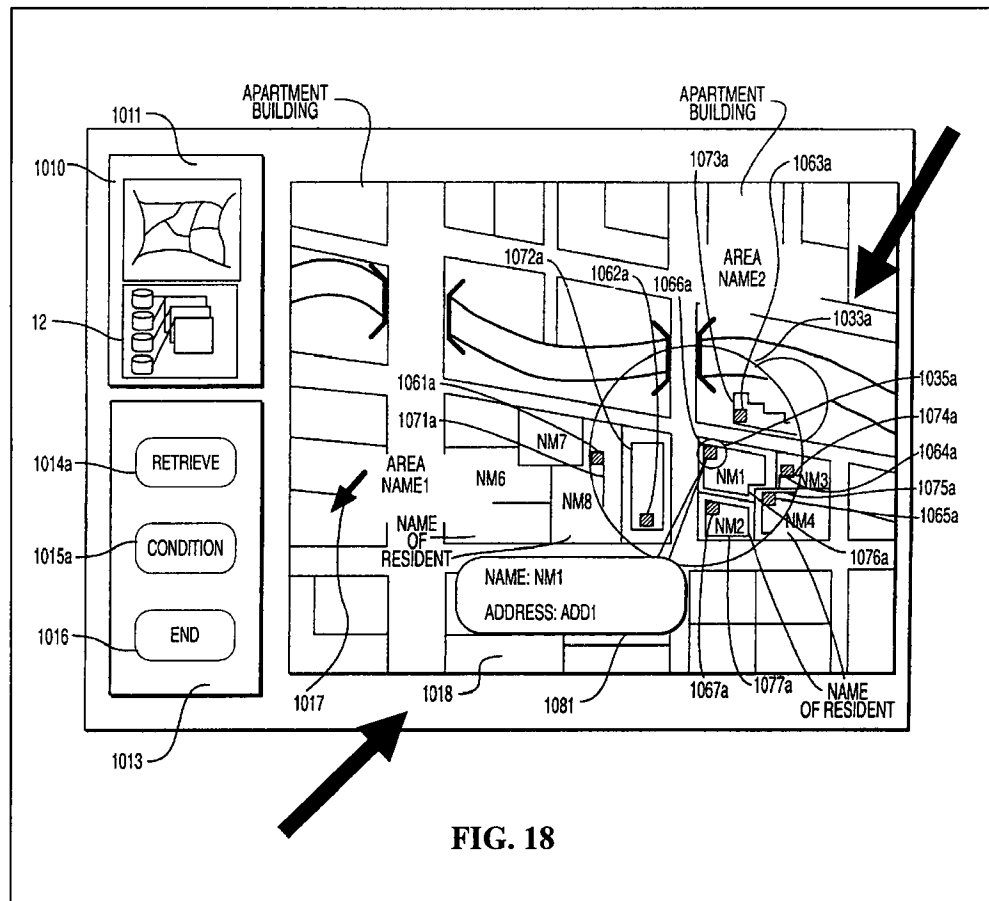
First: On pages 3-4 of the Final Office Action mailed August 6, 2007 (the "Final Office Action") the Examiner has rejected independent Claim 1 under 35 U.S.C. 103(a) as being unpatentable over United States Patent No. 6,523,024 to Yajima et al. ("Yajima") in view of "The Digital Magazine of InfoVis.net: Focus + Content" by Juan C. Dursteler ("Dursteler"), United States Patent Application Publication No. 2002/0044154 by Baar et al. ("Baar"), and United States Patent Application Publication No. 2003/0052896 by Higgins et al. ("Higgins").

On pages 3-4 of the Final Office Action the Examiner states the following concerning Yajima (underlining added):

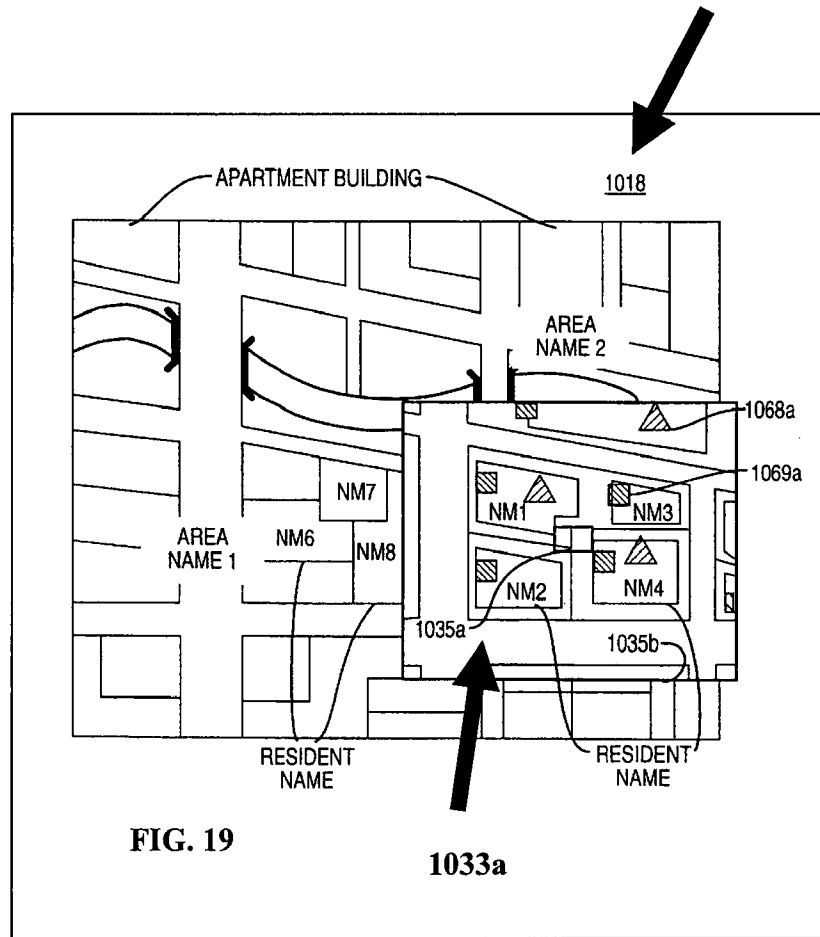
"Regarding independent claim 1, Yajima teaches a method for editing a multi-layer original image displayed on a display screen (Figure 19), comprising in response to receiving an indication to edit a region of said original image (column 7, line 56 – column 8, lines 9: information lens and magnifying lens functions), distorting a portion of a first layer of said original image to produce a distorted image for said region (column 7, line 56 – column 8, lines 9: the second image information is displayed in a form modified), said distorted image including a magnified region having a magnification for said region (Figure 19: the box representing a magnified view of the second image information)...Yajima teaches overlaying said distorted image on said region (column 7, line 56 – column 8, lines 9: the second image information) in a second undistorted layer (column 7, line 56 – column 8, lines 9: the first image information) of said original image to produce an overlaid image and displaying said overload image on said display screen to replace display of said original

image (Figure 19), said distorted image at least partially surrounded by non-overlaid portions of said second undistorted layer in said overlaid image (figure 19).”

FIG. 18 of Yajima is closely related to FIG. 19 of Yajima. Both of these figures are reproduced below for reference (high-lighting arrows and reference numbers added).



What FIG. 18 of Yajima shows is a presentation having a “first image information” **1018** and a “second image information” **1033a**. The first image information **1018** and the second image information **1033a** are shown at the same level of magnification in FIG. 18. However, the second image information **1033a** includes more detail (i.e., items **1071a** to **1077a**) than the first image information **1018**.



What FIG. 19 of Yajima shows is a presentation also having the first image information **1018** and the second image information **1033a**. In FIG. 19, the second image information **1033a** is magnified and includes even more detail (i.e., items **1068a** and **1069a**) than is shown in the second image information **1033a** of FIG. 18. In FIG. 19, the second image information **1033a** appears as an inset magnifier.

The first and second image informations **1018**, **1033a** simply present different levels of detail of the same original image or layer. That is, the second image information **1033a** may present additional information (e.g., items **1068a** and **1069a**) recovered from a database for the area of the first image information **1018** that it covers. It is apparent from FIGS. 18-19 of Yajima that the first and second image informations **1018**, **1033a** pertain to a single layer. In other words, the first and second image informations **1018**, **1033a** do not present different layers of the same original image. The first and second image informations **1018**, **1033a** are not a “first layer” and a “second undistorted layer” as recited in Claim 1.

As such, the Applicant respectfully submits that Yajima does not teach or suggest those elements of previous Claim 1 that recite: “distorting a portion of a first layer of said original image to produce a distorted image for said region”; “overlaying said distorted image on said region in a second undistorted layer of said original image to produce an overlaid image and displaying said overlaid image on said display screen to replace display of said original image, said distorted image at least partially surrounded by non-overlaid portions of said second undistorted layer in said overlaid image”; and, “upon completion of editing of said overlaid image, selectively propagating edits made to said first layer through to said second undistorted layer of said original image”.

Therefore, the Applicant respectfully submits that Yajima, Dursteler, Baar, and Higgins do not teach or suggest the subject matter of Claim 1.

Consequently, the Applicant respectfully submits that Claim 1 is not obvious under 35 U.S.C. 103(a).

Second: On page 4 of the Final Office Action the Examiner states the following concerning Higgins and Claim 1

“Higgins discloses whenever a change occurs on one map, the system causes the same change to occur on the other map (paragraph 110). It would have been obvious to modify Yajima’s system to modify one map and propagate changes to other maps.”

However, Higgins does not pertain to image distortion. A search for the word “distort” within the text of the on-line version of Higgins found no hits. That is, Higgins does not even mention the word “distort” (or distorting, etc.). What Higgins pertains to is synchronizing map images.

Therefore, and noting that the “overlaid image” of Claim 1 includes a “distorted image”, Higgins does not teach or suggest that element of Claim 1 that recites: “upon completion of editing of said overlaid image, selectively propagating edits made to said first layer through to said second undistorted layer of said original image”.

Therefore, the Applicant respectfully submits that Yajima, Dursteler, Baar, and Higgins do not teach or suggest the subject matter of Claim 1.

Consequently, the Applicant respectfully submits that Claim 1 is not obvious under 35 U.S.C. 103(a).

2. **Whether Claim 20 is unpatentable under 35 U.S.C. 103(a) over Yajima in view of Dursteler, Baar, and Higgins.**

On page 7 of the Final Office Action the Examiner has rejected independent Claim 20 under 35 U.S.C. 103(a) as being unpatentable over Yajima in view of Dursteler, Baar, and Higgins stating:

“Regarding claims 20-23, 25, and 30-35, calims 20-23, 25, and 30-35 are similar in scope as to claims 1-4, 6, and 11-16, thus the rejections for claims 1-4, 6, and 11-16 hereinabove is applicable to claims 20-23, 25, and 30-35.”

For the reasons given above with respect to Claim 1, the Applicant respectfully submits that the prior art references cited by the Examiner do not teach or suggest the subject matter of Claim 20. Consequently, the Applicant respectfully submits that Claim 20 is not obvious under 35 U.S.C. 103(a).

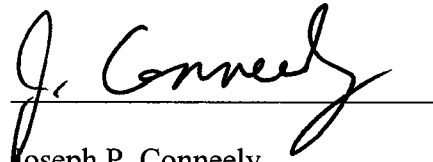
The Applicant respectfully requests that a timely Notice of Allowance be issued in this case.

Respectfully submitted,

McCarthy Tétrault LLP

Date: February 4, 2008

By

A handwritten signature in black ink, appearing to read "J. Conneely", is written over a horizontal line.

Joseph P. Conneely

Registration No. 54,883

Telephone: 416-601-8179

Fax: 416-868-0673

McCarthy Tétrault LLP
Box 48, Suite 4700
66 Wellington Street West
Toronto Dominion Bank Tower
Toronto, Ontario, Canada
M5K 1E6

VIII. CLAIMS APPENDIX

1. A method for editing a multi-layer original image displayed on a display screen, comprising:
in response to receiving an indication to edit a region of said original image, distorting a portion of a first layer of said original image to produce a distorted image for said region, said distorted image including a magnified region having a magnification for said region at least partially surrounded by an at least partially compressed region where said magnification decreases to that of said original image to provide context for said magnified region with respect to said original image;
overlaying said distorted image on said region in a second undistorted layer of said original image to produce an overlaid image and displaying said overlaid image on said display screen to replace display of said original image, said distorted image at least partially surrounded by non-overlaid portions of said second undistorted layer in said overlaid image;
and,
upon completion of editing of said overlaid image, selectively propagating edits made to said first layer through to said second undistorted layer of said original image.
2. The method of claim 1 wherein said distorting further includes applying a distortion function to said portion of said first layer by displacing said portion onto said distortion function and projecting said displaced portion onto a plane.
3. The method of claim 2 wherein said applying further includes displaying a graphical user interface ("GUI") over said distorted image for receiving one or more signals for adjusting said distortion function.

4. The method of claim 3 wherein said distortion function includes a focal region corresponding to said magnified region and having an elevation to provide said magnification upon said projecting onto said plane and a shoulder region corresponding to said compressed region where said elevation decreases to provide said decreasing magnification upon said projecting onto said plane and said GUI includes at least one of:

means for adjusting said elevation and hence said magnification;

means for adjusting a degree of scooping for said distortion function;

means for adjusting an extent for said focal region;

means for adjusting an extent for said shoulder region;

means for adjusting a location for said distortion function within said first layer;

means for adjusting a location for an outline of said shoulder region within said first layer;

and,

means for adjusting a location for said focal region relative to said shoulder region.

5. The method of claim 1 and further comprising receiving a signal for switching among said first and second layers.

6. The method of claim 1 and further comprising receiving a signal for selecting among said first and second layers.

7. The method of claim 1 and further comprising receiving a signal for selecting a folded distorted image in which said magnified region is repositioned.

8. The method of claim 7 wherein said folded distorted image further includes a second magnified region for said region in said second layer.

9. The method of claim 8 wherein said magnified region in said folded distorted region is repositioned by folding away from an original position relative to said compressed region to accommodate said second magnified region.

10. The method of claim 9 wherein said second magnified region is located at said original position and wherein said second magnified region has said magnification.
11. The method of claim 1 and further comprising receiving a signal for selecting a window for display within said magnified region.
12. The method of claim 11 wherein said window displays a portion of said second layer at said magnification.
13. The method of claim 3 wherein said one or more signals and said indication are generated with a pointing device.
14. The method of claim 1 wherein said first and second layers are one or more of raster, vector, point, and geo-referenced data layers.
15. The method of claim 1 wherein said indication, region, portion, first layer, distorted image, and second layer includes a plurality of indications, regions, portions, first layers, distorted images, and second layers, respectively.
16. The method of claim 4 wherein at least some of said means are icons.
17. The method of claim 1 and further comprising saving said edits for subsequent recall and application.
18. The method of claim 17 wherein said edits are saved as bookmarks.
19. The method of claim 18 wherein said editing includes applying said bookmarks.

20. A method for generating a presentation of a region of a multi-layer original image for display on a display screen, comprising:

distorting a portion of a first layer of said original image to produce a distorted image for said region, said distorted image including a magnified region having a magnification for said region at least partially surrounded by an at least partially compressed region where said magnification decreases to that of said original image to provide context for said magnified region with respect to said original image; and,

overlaying said distorted image on said region in a second undistorted layer of said original image to generate said presentation, said distorted image at least partially surrounded by non-overlaid portions of said second undistorted layer in said presentation; and,

displaying said presentation on said display screen.

21. The method of claim 20 wherein said distorting further includes applying a distortion function to said portion of said first layer by displacing said portion onto said distortion function and projecting said displaced portion onto a plane.

22. The method of claim 21 wherein said applying further includes displaying a graphical user interface ("GUI") over said distorted image for receiving one or more signals for adjusting said distortion function.

23. The method of claim 22 wherein said distortion function includes a focal region corresponding to said magnified region and having an elevation to provide said magnification upon said projecting onto said plane and a shoulder region corresponding to said compressed region where said elevation decreases to provide said decreasing magnification upon said projecting onto said plane and said GUI includes at least one of:

- means for adjusting said elevation and hence said magnification;
- means for adjusting a degree of scooping for said distortion function;
- means for adjusting an extent for said focal region;
- means for adjusting an extent for said shoulder region;
- means for adjusting a location for said distortion function within said first layer;
- means for adjusting a location for an outline of said shoulder region within said first layer;
- and,
- means for adjusting a location for said focal region relative to said shoulder region.

24. The method of claim 20 and further comprising receiving a signal for switching among said first and second layers.

25. The method of claim 20 and further comprising receiving a signal for selecting among said first and second layers.

26. The method of claim 20 and further comprising receiving a signal for selecting a folded distorted image in which said magnified region is repositioned.

27. The method of claim 26 wherein said folded distorted image includes a second magnified region for said region in said second layer.

28. The method of claim 27 wherein said magnified region in said folded distorted region is repositioned by folding away from an original position relative to said compressed region to accommodate said second magnified region.

29. The method of claim 28 wherein said second magnified region is located at said original position and wherein said second magnified region has said magnification.
30. The method of claim 20 and further comprising receiving a signal for selecting a window for display within said magnified region.
31. The method of claim 30 wherein said window displays a portion of said second layer at said magnification.
32. The method of claim 22 wherein said one or more signals are generated with a pointing device.
33. The method of claim 20 wherein said first and second layers are one or more of raster, vector, point, and geo-referenced data layers.
34. The method of claim 20 wherein said indication, region, portion, first layer, distorted image, and second layer includes a plurality of indications, regions, portions, first layers, distorted images, and second layers, respectively.
35. The method of claim 23 wherein at least some of said means are icons.

IX. EVIDENCE APPENDIX

None.

X. RELATED PROCEEDINGS APPENDIX

None.